

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/83,908A
Source: IFW/6
Date Processed by STIC: 10/28/05

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IFW16

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/813,908A

DATE: 10/28/2005
 TIME: 11:39:21

Input Set : A:\Sequence Listing.txt
 Output Set: N:\CRF4\10272005\J813908A.raw

3 <110> APPLICANT: Frey, Joachim
 4 Stuber, Katja
 5 Thornton, Julian C
 6 Kuzyk, Michael A.
 7 Burian, Jan
 9 <120> TITLE OF INVENTION: Type III Secretion Pathway in Aeromonas Salmonicida, and
 Uses
 10 Therefor
 12 <130> FILE REFERENCE: UB001/2850/US
 14 <140> CURRENT APPLICATION NUMBER: US 10/813,908A
 15 <141> CURRENT FILING DATE: 2004-03-26
 17 <150> PRIOR APPLICATION NUMBER: US 10/416,902
 18 <151> PRIOR FILING DATE: 2001-11-15
 20 <150> PRIOR APPLICATION NUMBER: PCT/CA 01/01589
 21 <151> PRIOR FILING DATE: 2001-11-15
 23 <150> PRIOR APPLICATION NUMBER: US 60/248,864
 24 <151> PRIOR FILING DATE: 2000-11-15
 26 <160> NUMBER OF SEQ ID NOS: 15
 28 <170> SOFTWARE: PatentIn version 3.3
 30 <210> SEQ ID NO: 1
 31 <211> LENGTH: 47
 32 <212> TYPE: PRT
 33 <213> ORGANISM: Aeromonas salmonicida
 35 <400> SEQUENCE: 1
 37 Glu Leu Lys Arg Leu Ile Arg Leu Leu Pro Val Glu Leu Phe Ser Glu
 38 1 5 10 15
 41 Glu Glu Gln Arg Gln Asn Leu Leu Gln Cys Cys Gln Gly Ala Leu Asp
 42 20 25 30
 45 Asn Ala Ile Glu Arg Glu Glu Asp Glu Leu Ser Gly Glu Ser Ser
 46 35 40 45
 49 <210> SEQ ID NO: 2
 50 <211> LENGTH: 123
 51 <212> TYPE: PRT
 52 <213> ORGANISM: Aeromonas salmonicida
 54 <400> SEQUENCE: 2
 56 Met Asn Trp Ile Glu Pro Leu Leu Val Gln Phe Cys Gln Asp Leu Gly
 57 1 5 10 15
 60 Ile Thr Ile Gly Asp Asn Pro His Ser Leu Ile Gln Leu Glu Leu Glu
 61 20 25 30
 64 Gln Ser Gly Thr Leu Gln Leu Glu Arg His Gln Gly Gln Leu Thr Leu
 65 35 40 45
 68 Trp Leu Ala Arg Ala Val Pro Trp His Gln Ser Gly Glu Ala Ile Arg
 69 50 55 60
 72 Arg Ala Met Thr Leu Thr Ala Ala Ala Gln Gly Pro Ala Leu Pro Val

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73 65 70 75 80
76 Arg Ser Gly Trp Leu Gly Glu Gln Leu Ile Leu Phe Val Ser Leu
77 85 90 95
80 Asp Glu Arg Ala Val Thr Leu Pro Gln Leu His Gln Ala Val Thr Thr
81 100 105 110
84 Leu Thr Arg Leu Gln Arg Glu Val Leu Ala Ser
85 115 120
88 <210> SEQ ID NO: 3
89 <211> LENGTH: 121
90 <212> TYPE: PRT
91 <213> ORGANISM: Aeromonas salmonicida
93 <400> SEQUENCE: 3
95 Met Ser Arg Ile Thr Ala Ala His Ile Gly Ile Glu Gln Leu Ser Ala
96 1 5 10 15
99 Ile Ser Leu Asp Asp Gln Glu Arg Ser Leu Pro Gly Arg Tyr Ala Leu
100 20 25 30
103 Leu Pro Asp Gly Gln Ser Ile Glu Pro His Ile Ser Arg Leu Tyr Pro
104 35 40 45
107 Glu Arg Leu Ala Asp Arg Val Leu Leu Asp Phe Ala Thr Pro Asp Arg
108 50 55 60
111 Gly Phe His Asp Leu Leu Arg Pro Val Asp Phe Asn Gln Ala Met Gln
112 65 70 75 80
115 Gly Leu Arg Ser Val Leu Ala Glu Gly Gln Ser Pro Glu Leu Arg Ala
116 85 90 95
119 Ala Ala Ala Leu Leu Glu Gln Met His Ala Asp Glu Gln Leu Met Gln
120 100 105 110
123 Met Thr Leu His Leu Leu His Lys Val
124 115 120
127 <210> SEQ ID NO: 4
128 <211> LENGTH: 116
129 <212> TYPE: PRT
130 <213> ORGANISM: Aeromonas salmonicida
132 <400> SEQUENCE: 4
134 Met Thr Met Val Leu Thr Ser Gln Gln Gln Asp Ala Leu Leu Thr
135 1 5 10 15
138 Gly Trp Leu Gln Leu Gln Tyr Gly His Pro Asp Lys Ala Ser Val Leu
139 20 25 30
142 Leu Ala Ala Leu Leu Gln Ile His Pro Asp His Gln Gly Gly Arg Arg
143 35 40 45
146 Thr Leu Leu Val Ala Leu Leu Lys Gln Gly Glu Gly Glu Ala Ala Leu
147 50 55 60
150 Ala His Val Asp Gln Leu Met Gln Gln Gly Glu Ala Asp Gly Pro Leu
151 65 70 75 80
154 Trp Leu Cys Arg Ser Arg Ala Cys Gln Leu Ala Gly Arg Leu Asp Glu
155 85 90 95
158 Ala Arg Phe Ala Tyr Gln Gln Tyr Leu Glu Leu Glu Glu Gln Asn Glu
159 100 105 110
162 Ser Thr His Pro
163 115

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166 <210> SEQ ID NO: 5
167 <211> LENGTH: 116
168 <212> TYPE: PRT
169 <213> ORGANISM: Aeromonas salmonicida
171 <400> SEQUENCE: 5
173 Met Thr Met Val Leu Thr Ser Gln Gln Gln Asp Ala Leu Leu Leu Thr
174 1 5 10 15
177 Gly Trp Leu Gln Leu Gln Tyr Gly His Pro Asp Lys Ala Ser Val Leu
178 20 25 30
181 Leu Ala Ala Leu Leu Gln Ile His Pro Asp His Gln Gly Gly Arg Arg
182 35 40 45
185 Thr Leu Leu Val Ala Leu Leu Lys Gln Gly Glu Gly Glu Ala Ala Leu
186 50 55 60
189 Ala His Val Asp Gln Leu Met Gln Gln Gly Glu Ala Asp Gly Pro Leu
190 65 70 75 80
193 Trp Leu Cys Arg Ser Arg Ala Cys Gln Leu Ala Gly Arg Leu Asp Glu
194 85 90 95
197 Ala Arg Phe Ala Tyr Gln Gln Tyr Leu Glu Leu Glu Glu Gln Asn Glu
198 100 105 110
201 Ser Thr His Pro
202 115
205 <210> SEQ ID NO: 6
206 <211> LENGTH: 93
207 <212> TYPE: PRT
208 <213> ORGANISM: Aeromonas salmonicida
210 <400> SEQUENCE: 6
212 Met Leu Val Arg Arg Glu Gly Glu Arg Ala Gly Leu Ala Asn Pro Phe
213 1 5 10 15
216 Ala Ala Leu Tyr Leu Leu Ala Glu Ala Thr Leu Ala Val Leu Gly Pro
217 20 25 30
220 Gly His Phe Leu Tyr Gly Asn Val Asp Val Phe Arg Ser Ser Ser Leu
221 35 40 45
224 Ser Ser Glu Arg Leu Gly Arg Phe Tyr Leu Arg Trp Thr Gly Ala Ser
225 50 55 60
228 Glu Pro Glu Pro Gly Trp Phe Met Leu Ala Thr Glu Gln Val Cys Ser
229 65 70 75 80
232 Leu Arg Asp Met Arg Lys Arg Gln Lys His Gly Leu Ala
233 85 90
236 <210> SEQ ID NO: 7
237 <211> LENGTH: 94
238 <212> TYPE: PRT
239 <213> ORGANISM: Aeromonas salmonicida
241 <400> SEQUENCE: 7
243 Met Lys Gln Pro Arg Phe Ala Asp His Ser Glu Thr Ile Ser Gln Ala
244 1 5 10 15
247 Glu His Gly Ile Ala Asp Ser Asp His Arg Asn Ala Leu Leu Gln Glu
248 20 25 30
251 Met Leu Ala Gly Leu Ala Leu Ser Asp Gln Thr Cys Gln Leu Leu Phe
252 35 40 45

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255 Glu Ala Pro Thr Glu Gln Val Ala Val Ala Glu Gln Glu Leu Leu Ala
256      50          55          60
259 Glu Ile Gln Arg Arg Gln Ala Leu Leu Pro Ala Gln Pro Gly Glu Gly
260      65          70          75          80
263 Arg Lys Ser Arg Arg Pro Thr Ile Met Arg Gly Leu Met Ile
264          85          90
267 <210> SEQ ID NO: 8
268 <211> LENGTH: 361
269 <212> TYPE: PRT
270 <213> ORGANISM: Aeromonas salmonicida
272 <400> SEQUENCE: 8
274 Met Ser Thr Ile Pro Asp Tyr Asn Thr Asn Pro Gly Ala Phe Val Gly
275 1          5          10          15
278 Trp Leu Asp Val Gln Ala Leu Asn Thr Leu Pro Gly Asn Lys Asn Pro
279          20          25          30
282 Lys Leu Thr Glu Leu Val Glu Leu Leu Lys Gly Lys Ile Thr Ile Ser
283          35          40          45
286 Ala Asp Ser Ser Thr Ala Leu Ser Lys Glu Gln Leu Glu Lys Leu Leu
287          50          55          60
290 Ala Ala Tyr Leu Thr Asp Pro Ala Ser Ile Asn Gly Gly Trp Ala Met
291 65          70          75          80
294 Gly Gln Phe Lys Gly Gly Gln Asp Ala Ala Ile Ala Ala Ile Lys Gly
295          85          90          95
298 Val Ile Glu Arg Gly Ala Lys Gln Thr Pro Pro Val Thr His Trp Thr
299          100         105         110
302 Ile Pro Glu Phe Met Leu Leu Ser Leu Ser Ala Leu Thr Met Glu Arg
303          115         120         125
306 Thr Asp Asp Asp Leu Ile Thr Thr Phe Thr Gly Val Met Met Phe Gln
307          130         135         140
310 Asp Asn Gln Arg Lys Gly Leu Arg Asp Glu Leu Ala Glu Met Thr Ala
311 145         150         155         160
314 Glu Leu Lys Ile Tyr Gly Val Ile Gln Ser Glu Ile Asn Gln Val Leu
315          165         170         175
318 Ser Ala Ala Ser Asn Gln Thr Phe Lys Thr Asn Phe Asn Leu Met Asp
319          180         185         190
322 Tyr Lys Leu Tyr Gly Tyr Glu Ser Leu Ala Lys Phe Met Glu Gly Gly
323          195         200         205
326 Glu Phe Lys Leu Leu Ser Lys Met Phe Ser Asp Glu Gln Val Thr Lys
327          210         215         220
330 Ala Gln Gln Asp Phe Thr Asn Ala Lys Asn Glu Leu Glu Asn Val Thr
331 225         230         235         240
334 Ser Thr Ser Leu Asn Pro Lys Ile Gln Ala Glu Ala Lys Thr Asp Tyr
335          245         250         255
338 Glu Arg Lys Lys Ala Ile Phe Glu Glu Ile Val Glu Thr Gln Ile Ile
339          260         265         270
342 Thr Leu Lys Thr Phe Leu Glu Ser Asp Leu Lys Lys Ser Gly Ala Met
343          275         280         285
346 Ser Gly Ile Glu Ala Glu Tyr Lys Tyr Asp Lys Asp Asn Asn Lys Leu
347          290         295         300

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350 Gly Asn Phe Ser Thr Ser Val Ser Asp Arg Ser Arg Pro Leu Asn Asp
 351 305 310 315 320
 354 Leu Val Ser Glu Lys Thr Ala Arg Leu Asn Asp Val Ser Ser Arg Tyr
 355 325 330 335
 358 Asn Ala Ala Ile Glu Ala Leu Asn Arg Phe Ile Gln Lys Tyr Asp Ser
 359 340 345 350
 362 Ile Met Arg Asp Ile Leu Gly Ala Ile
 363 355 360
 366 <210> SEQ ID NO: 9
 367 <211> LENGTH: 159
 368 <212> TYPE: PRT
 369 <213> ORGANISM: Aeromonas salmonicida
 371 <400> SEQUENCE: 9
 373 Met Gln Thr Asp Thr Thr Leu Thr Pro Glu Tyr Glu Ala Glu Leu Glu
 374 1 5 10 15
 377 Ala Phe Met Ala Asp Gly Gly Thr Leu Ala Met Leu Gln Asp Ile Ser
 378 20 25 30
 381 Gly Asp Thr Leu Glu Gln Leu Tyr Ala Leu Ala Phe Ser Gln Tyr Gln
 382 35 40 45
 385 Ala Gly Lys Trp Glu Asp Ala His Lys Ile Phe Gln Ala Leu Cys Met
 386 50 55 60
 389 Leu Asp His Tyr Glu Pro Arg Tyr Phe Leu Gly Leu Gly Ala Cys Arg
 390 65 70 75 80
 393 Gln Ala Met Gly Glu Phe Glu Thr Ala Val Gln Ser Tyr Ser Phe Gly
 394 85 90 95
 397 Ala Met Leu Asp Leu Lys Asp Pro Arg Phe Pro Phe His Ala Gly Glu
 398 100 105 110
 401 Cys Arg Leu Gln Gln Gly Asp Leu Asn Gly Ala Glu Ser Gly Phe His
 402 115 120 125
 405 Ser Ala Arg Leu Leu Ala Asp Thr Asp Pro Gln Gln Ala Asp Leu Ala
 406 130 135 140
 409 Ala Ser Ala Lys Val Met Leu Glu Ala Ile Ala Ile Arg Arg Asp
 410 145 150 155
 413 <210> SEQ ID NO: 10
 414 <211> LENGTH: 5678
 415 <212> TYPE: DNA
 416 <213> ORGANISM: Aeromonas salmonicida
 418 <400> SEQUENCE: 10
 419 gagctcaagc ggctgatccg cctgctgccg gtggagctgt tcagtgaaga ggagcagcgc 60
 421 cagaatctgt tgcagtgcgt tcagggtgcg ctcgataacg ccatcgagcg ggaagaggat 120
 423 gagttgtctg gagagtgcgtc atgaactgga ttgaacccct gctggtgca gtttgcagg 180
 425 atttggcat caccataggg gataaccccc attcgctgat ccagcttgaa ctggagcaga 240
 427 gcggcactct gcagctggag cgccatcagg ggcaactgac cctatggttg gcccgcgcg 300
 429 tgccctggca tcagagtggc gaggccattc gccgcgccat gaccttgact gccgcggcgc 360
 431 aaggggccggc actgccggtg cgcaagcggt ggttggggga ggagcagttg atccctttcg 420
 433 tctccctgga tgagcgggcc gtgactctgc cccagctcca tcagggccgtg accaccctga 480
 435 cccgggttgcgca gcgagaggtg ctggcgtcat gagccggatc actgccgcgc atatcggtat 540
 437 cgagcagctc agcgccatct ccctcgacga tcagggagcgc agcctgccc ggcgttatgc 600
 439 cctgttgcggc gatggccagt ccatcgaaacc ccataatcagc cgcccttacc ccgagcggct 660

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/28/2005
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Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:11,12,13,14,15

VERIFICATION SUMMARY

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